

Pressure Reducing Valve DMV 765

set range: 0,5 - 9,0 bar



Advantage

- pressure setting possible at any time, also during operation
- high reproducibility of the set pressure
- high level of operating safety and long service life
- constant, low vibration control
- low-maintenance
- hermetically sealed by valve diaphragm with formed sealing rings
- considerably shortened face-to-face dimension with injection moulded threaded neck according to DIN 8063
- metal inserts in the valve housing allow the valves to be directly fitted to mounting sets, the movability of the union nuts on the valves made of PVC-U, PP and PVDF remains unaffected

Application

- chemical plants
- industrial plants
- water treatment

Utilisation

- The pressure reducing valve which is directly controlled by the medium, is used in technical processing plants for reducing primary pressures to system dependent working pressures and for controlled maintenance of working pressures.

Valve Function

- The opened valve is in equilibrium between the inlet pressure (primary side) and the lower working pressure (secondary side). If the working pressure goes above or below the desired value, the large area membrane is lifted against the spring force or pressed down by the spring force. The valve starts closing or opening until the equilibrium condition is reached again, i.e. the working pressure remains constant independent of an increasing or decreasing inlet pressure (as long as the inlet pressure > working pressure).

Valve Setting

- Set or adjust the working pressure to be kept constant at the adjustment screw with the aid of pressure gauges (ASV diaphragm pressure gauge guard with pressure gauge, type MDM 902) in the pipe system after removing the protection cap. The adjustment screw is secured by a counter nut and can be sealed against unauthorized adjustment, if necessary.
- There are two types of application:
 - secondary pressure - system closed or
 - secondary pressure - system dynamically flowing

Flow Media

- Technically pure, neutral and aggressive fluids, provided that the selected valve materials coming into contact with the media are resistant at the operating temperature according to the ASV resistance guide.
- For nitric acid or sulfuric acid please specify the precise operating conditions of the application.

Fluid Temperature

- see pressure/temperature diagram

Operating Pressure

- see pressure/temperature diagram

Set Range

- 0.5 - 9.0 bar

Nominal Pressure (H₂O, 20°C)

- PN 10

Working Pressure

- set pressure minus flow dependent pressure reduction:
- secondary pressure
- 0,5 - 9,0 bar

Constant Working Pressure

- Difference between the maximum and minimum secondary pressure, caused by primary pressure fluctuations:
- approx. ± 0.2 bar

Hysteresis

- Difference between opening and closing pressure
- approx. 0.1 - 0.4 bar

Valve Body

- PVC-U
- PP
- PVDF

Bonnet

- PP, glass fibre reinforced

Diaphragm

- PTFE (EPDM diaphragm with PTFE coating on the surfaces coming into contact with the medium)

Sealing

- FPM
- EPDM

Screws

- stainless steel (1.4301)

Actuation

- medium controlled

Connection

- union DIN 8063
- union socket end for solvent welding DIN ISO (PVC-U)
- union socket end for fusion welding DIN ISO (PP)
- union socket end for fusion welding DIN ISO (PVDF)
- spigot end for solvent welding DIN ISO (PVC-U)
- fusion spigot end DIN ISO (PP)
- fusion spigot end DIN ISO (PVDF)
- backing flange DIN 2501, PN 10/16, on request

Flow Direction

- always in the direction of the arrow

Mounting

- as required

Colour

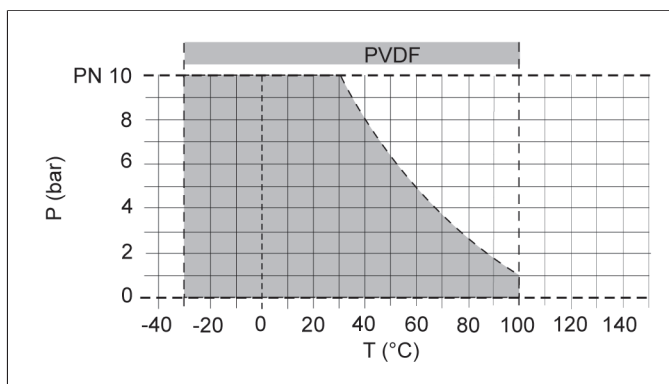
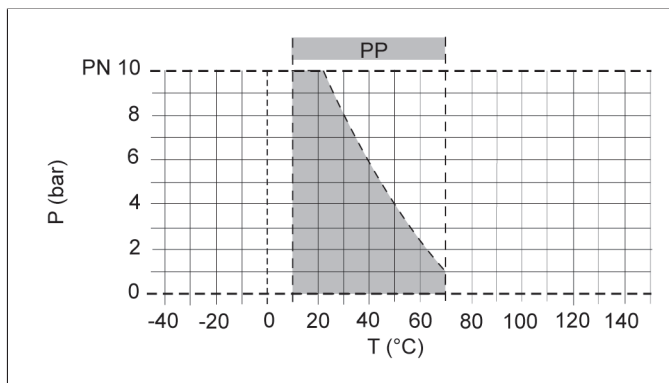
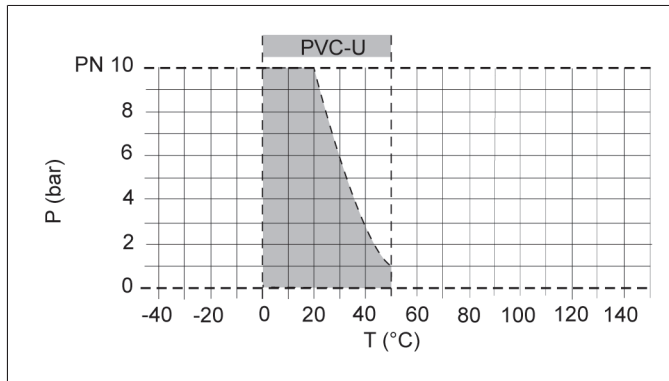
- bonnet: orange, RAL 2004
- bottom section: PVC-U, grey, RAL 7011
- bottom section: PP, grey, RAL 7032
- bottom section: PVDF, opaque, yellowish-white

Pressure Gauge Connection

- The pressure reducing valves can be factory fitted with a pressure gauge for neutral media. The resistance of the pressure gauge material has to be taken into consideration for other media.

Pressure reducing valves, Pressure Reducing Valve DMV 765

Pressure/temperature diagram



P = operating pressure

T = temperature

The pressure/temperature limits are applicable for the stated nominal pressures and a computed operating life factor of 25 years. These are standard values for harmless media (DIN 2403), to which the valve material is resistant.

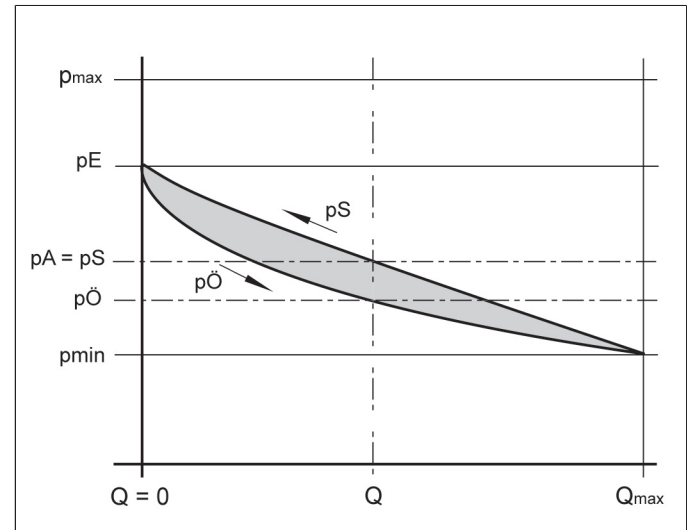
For other media please refer to the ASV resistance guide.

The durability of wear parts depends on the operating conditions of the application.

For temperatures below 0°C (PP < +10°C) please specify the precise operating conditions of the application.

The rated pressure depends on the valve size and material. For the corresponding rated pressure value of the valve, please refer to the »Order table«.

Operating behaviour



pE = set pressure

pA = working pressure

pO = opening pressure

pS = closing pressure

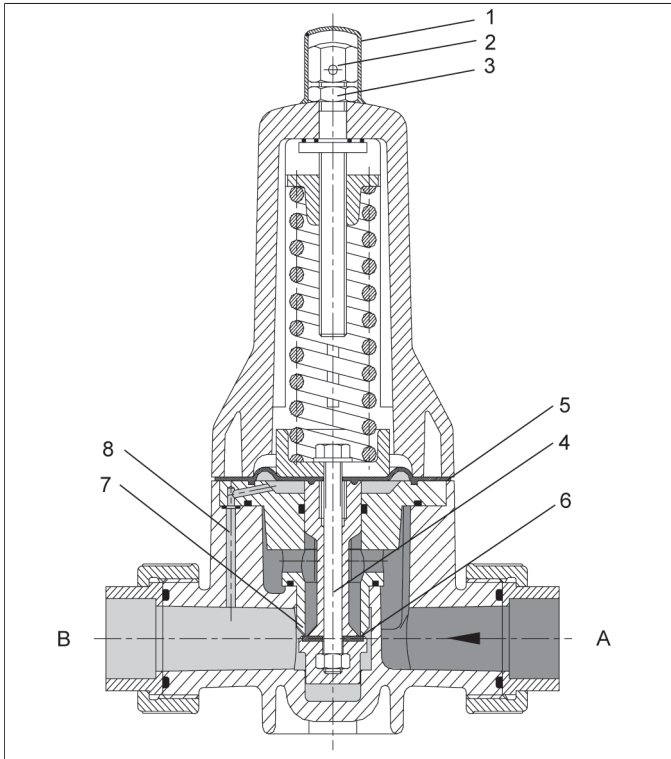
$pO - pS$ = hysteresis

$pA - pE$ = flow dependent pressure reduction

Q = flow

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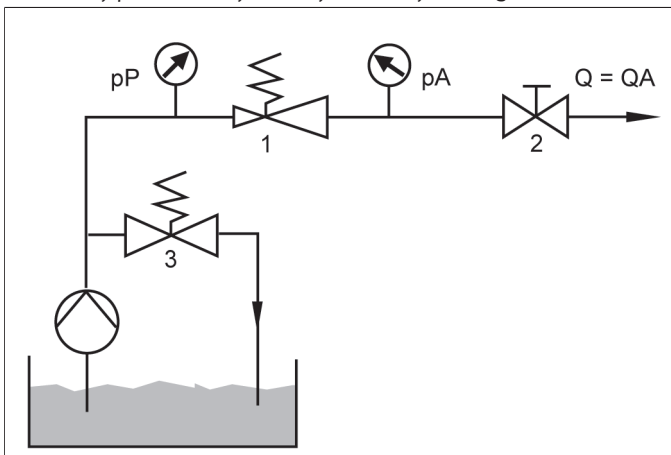
Sectional drawing DMV 765



- A = primary side
- B = secondary side
- 1 = protection cap
- 2 = adjustment screw
- 3 = counter nut
- 4 = piston
- 5 = diaphragm
- 6 = flat sealing ring
- 7 = valve seat
- 8 = control bore hole

Applications

secondary pressure - system dynamically flowing

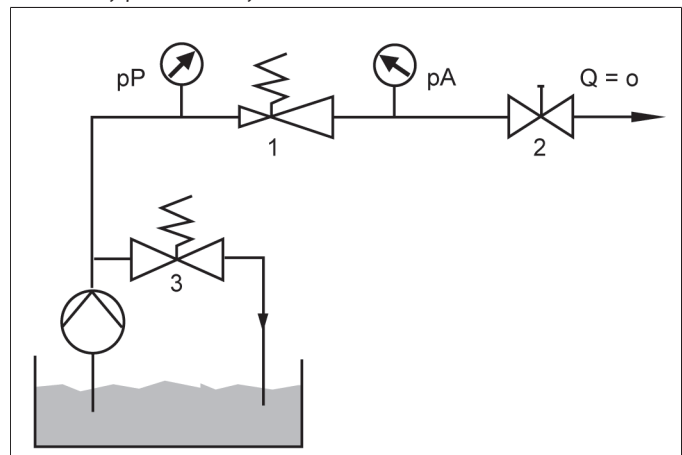


- pP = pump pressure
- pA = working pressure
- 1 = Pressure Reducing Valve
- 2 = stop valve
- 3 = Pressure Relief Valve

If the stop valve is closed, the working pressure pA rises by the amount of the closing pressure pS.

Applications

Secondary pressure - System closed



- pP = pump pressure
- pA = working pressure
- 1 = Pressure Reducing Valve
- 2 = stop valve
- 3 = Pressure Relief Valve

If the stop valve is opened, the working pressure pA drops by the amount of the opening pressure pÖ.

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Malfunctions, possible causes, rectification

Malfunction:	Cause:	Rectification:
Valve leaking at the diaphragm.	Insufficient contact pressure (membrane fastening). O-ring defective (13).	Tighten the connecting screws. Renew O-ring (13).
Pressure exceeds the set value.	Valve seat/seat seal defective. Diaphragm defective. Control bore hole soiled or blocked. Valve piston jammed.	Check piston and/or seat seal, replace, if necessary. Replace diaphragm. Dismantle piston and clean bore hole. Clean valve.
Valve closed (does not open).	Valve fitted the wrong way round.	Turn the valve around, observe the arrow for the direction of flow.
Medium leakage at the adjustment screw.	Diaphragm defective.	Replace diaphragm.

Maintenance note

Screw tightening torque (Nm)

d (mm)	16	20	25	32	40	50	63
Md (Nm)	4,5	4,5	6	6	8	8	8

The specified values apply to lubricated screws.

Check the tightening torque of the body screws at certain intervals in case of setting of the diaphragms and/or temperature fluctuations.

Operating note

Safe operation of the valve can only be ensured if it is properly installed, operated, serviced or repaired by qualified personnel according to its intended use while observing the accident prevention regulations, safety regulations, relevant standards, directives/technical regulations or codes of practice such as e.g. DIN, DIN EN, DIN ISO and DVS*. *DVS = German Welding Society
 The intended use includes adhering to specified limit values for pressure and temperature, as well as checking the resistance. This requires all components coming into contact with the medium to be "resistant" in accordance with the ASV resistance guide.

Pressure gauge version

If the valve body is equipped with a pressure gauge, do not tighten the pressure gauge with more than max. 3 Nm.

If the secondary pressure is additionally increased by the counterpressure, the pressure reducing valve DMV acts as a non-return valve. This force can lead to destruction of the valve piston.

Please take into account that the material PTFE is classified as resistant against many media, however, PTFE is not diffusion tight when used as a film, e.g. for the ASV membranes. Please contact us for limit cases (nitric acid or sulfuric acid).

